

# Contents

## Biotechnology

- P. Adlercreutz, B. Mattiasson: Oxygen Supply to Immobilized Cells. 3. Oxygen Supply by Hemoglobin or Emulsions of Perfluorochemicals 165
- M. Berovič, A. Cimerman: Redox Potential in Submerged Citric Acid Fermentation 188
- S. K. Duggal, K. Buchholz: Effects of Immobilization on Intrinsic Kinetics and Selectivity of Trypsin 81
- R. U. Edgehill, R. K. Finn: Isolation, Characterization and Growth Kinetics of Bacteria Metabolizing Pentachlorophenol 179
- M. Edwards, R. Eschenbruch, P. C. Molan: Foaming in Winemaking. I. A Technique for the Measurement of Foaming in Winemaking 105
- M. C. Hours: Influence of Oxygen on the Synthesis of Flavocytochrome b2 by the Yeast *Hansenula anomala* 171
- A. Jaworski, L. Sedlaczek, A. Sasiak, J. Długoński: Transformation of Steroids by Fungal Spores. II. Enhancement of Cortisol Hydroxylation by *Cunninghamella elegans* Spores Treated with Factors which Loosen the Spore Wall Structure 63
- I. Karube, N. Urano, T. Matsunaga, S. Suzuki: Hydrogen Production from Glucose by Immobilized Growing Cells of *Clostridium butyricum* 5
- C. P. Kubicek, D. E. Pitt: Effect of Dilution Rate on  $\beta$ -Glucosidase Secretion and Cell Wall Metabolism in *Trichoderma aureoviride* Cultivated in a Continuous Air Lift Fermenter 189
- J. H. T. Luong, B. Volesky: A New Technique for Continuous Measurement of the Heat of Fermentation 28
- H. Maeda, S. Kajiwara, N. Quiroz Araujo: The Separation of Solids from the Liquefied Mash of Cassava Tuber and the Continuous Saccharification by Immobilized Glucosylase 92
- I. M. Mishra, S. A. El-Temtamy, K. Schügerl: Growth of *Saccharomyces cerevisiae* in Gaseous Fluidized Beds 197
- P. C. Molan, M. Edwards, R. Eschenbruch: Foaming in Winemaking. II. Separation and Partial Characterisation of Foam-Inducing Proteins Excreted by a Pure Culture Wine Yeast 110
- A. Nakajima, T. Horikoshi, T. Sakaguchi: Recovery of Uranium by Immobilized Microorganisms 88
- H. Narushima, T. Omori, Y. Minoda: Microbial Transformation of  $\alpha$ -Pinene 174
- G. Pines, A. Freeman: Immobilization and Characterization of *Saccharomyces cerevisiae* in Crosslinked, Prepolymerized Polyacrylamide-Hydrazide 75
- T. Rudd, R. M. Sterritt, J. N. Lester: The Use of Extraction Methods for the Quantification of Extracellular Polymer Production by *Klebsiella aerogenes* Under Varying Cultural Conditions 23
- J. N. Saddler, M. K.-H. Chan: Optimization of *Clostridium thermocellum* Growth on Cellulose and Pretreated Wood Substrates 99
- K. Sonomoto, K. Nomura, A. Tanaka, S. Fukui: 11 $\alpha$ -Hydroxylation of Progesterone by Gel-Entrapped Living *Rhizopus stolonifer* Mycelia 57
- K. Toda, I. Yabe, T. Yamagata: Kinetics of Yeast Growth and Enzyme Syntheses in a Phosphate-Limited Continuous Culture 10
- K. Toda, I. Yabe, T. Yamagata: Invertase and Phosphatase of Yeast in a Phosphate-Limited Continuous Culture 17
- Z.-H. Yi, H. J. Rehm: Formation of  $\alpha,\omega$ -Dodecanedioic Acid and  $\alpha,\omega$ -Tridecanedioic Acid from Different Substrates by Immobilized Cells of a Mutant of *Candida tropicalis* 1
- B. Yongsmith, K. Sonomoto, A. Tanaka, S. Fukui: Production of Vitamin B<sub>12</sub> by Immobilized Cells of a Propionic Acid Bacterium 70

## Industrial Microbiology

- S. W. Brown, S. G. Oliver: Isolation of Ethanol-Tolerant Mutants of Yeast by Continuous Selection 119
- J. D'Souza, O. Volfová: The Effect of pH on the Production of Cellulases in *Aspergillus terreus* 123
- P. Kaur, J. T. Worgan: Lipid Production by *Aspergillus oryzae* from Starch Substrates 126
- M. Matsumura, T. Yoshida, H. Taguchi: Synthesis of Cephalosporin C by a Methionine Analogue Resistant Mutants of *Cephalosporium acremonium* 114
- M. Moresi, G. Marchionni: Preliminary Study on the Operating Variables of SCP Production from Grape Must 204
- S. Pažoutová, L. S. Slokoska, N. Nikolova, T. I. Angelov: Sugar and Phosphate Metabolism and Alkaloid Production Phases in Submerged Cultures of Two *Claviceps* Strains 208
- N. H. Piggott, I. W. Sutherland, T. R. Jarmann: Alginate Synthesis by Mucoid Strains of *Pseudomonas aeruginosa* PAO 131

## Environmental Microbiology

- B. A. Weiner: Silage Fermentation of Swine Waste Combined with Corn 39
- F. Zadrazil, H. Brunnert: Solid State Fermentation of Lignocellulose Containing Plant Residues with *Sporotrichum pulverulentum* Nov. and *Dichomitus squalens* (Karst.) Reid. 45

## Applied Microbiology

- D. Ben-Ghedalia: Degradation of Cell-Wall Monosaccharides of Chemically Treated Grape Branches by Rumen Microorganisms 142
- S. Cometta, B. Sonnleitner, W. Sidler, A. Fiechter: Population Distribution of Aerobic Extremely Thermophilic Microorganisms in an Icelandic Natural Hot Spring 151
- H. W. Doelle, H.-J. Preusser, H. Rostek: Electron Microscopic Investigations of *Zymomonas mobilis* Cells Grown in Low and High Glucose Concentrations 136
- V. Hecht, K. Schügerl, W. Scheiding: Conversion of Cellulose into Fungal Cell Mass 219
- J.-C. Lazzaroni, R. Portier: Production of Extracellular Alkaline Phosphatase by *Escherichia coli* K-12 Periplasmic-Leaky Mutants Carrying *phoA*<sup>+</sup> Plasmids 146
- J. Netval, V. Vojtišek: Production of Phenylacetylcarbinol in Various Yeast Species 35
- G. B. Patel, C. R. Mackenzie: Metabolism of *Acetivibrio cellulolyticus* During Optimized Growth on Glucose, Cellobiose and Cellulose 212

## Short Communications

- K. Esser, U. Schmidt, U. Stahl: Ethanol and Biomass Production of Wild Strains and Respiratory Deficient Mutants of *Saccharomyces cerevisiae* Under Anaerobic and Aerobic Conditions 161
- T. Matsunaga, I. Karube, N. Teraoka, S. Suzuki: Determination of Cell Numbers of Lactic Acid Producing Bacteria by Lactate Sensor 157
- B. Mattiasson, B. Hahn-Hägerdal: Microenvironmental Effects on Metabolic Behaviour of Immobilized Cells, a Hypothesis 52
- A. Singer, J. Navrot, R. Shapira: Extraction of Aluminium from Fly-Ash by Commercial and Microbiologically-Produced Citric Acid 228
- S. M. Tauk: Culture of *Candida* in Vinasse and Molasses: Effect of Acid and Salt Addition on Biomass and Raw Protein Production 223